## **ABSTRACT**

Isolated nucleic acid molecules containing polymorphisms in genes involved in neurodegenerative diseases are provided. Probes, primers, kits and methods for detection of polymorphisms in genes involved in neurodegenerative disease are provided. Methods based on detecting such polymorphisms for prognosticating, determining the occurrence, profiling drug response and drug discovery are also provided. Methods of screening for agents that modulate expression and/or activity of genes involved in neurodegenerative diseases, and of screening for agents that modulate a biological event characteristic of a neurodegenerative disease are further provided.

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